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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,170	12/13/2006	Young-Woo Kim	4220-127 US	1116
26817 7590 03/22/2010 MATHEWS, SHEPHERD, MCKAY, & BRUNEAU, P.A. 29 THANET ROAD, SUITE 201 PRINCETON, NJ 08540				
EXAMINER LEUBECKER, JOHN P				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/577,170

**Applicant(s)**

KIM, YOUNG-WOO

**Examiner**

John P. Leubecker

**Art Unit**

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 April 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SI/22)  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on April 24, 2009 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, the phrase "located and fixed *with parallel structure*" (emphasis added) is indefinite<sup>1</sup> as to its intended meaning and requires clarification. Particularly, what structure is encompassed by "parallel structure" can not be determined (the specification does not define any element that would be encompassed by such term).

In addition, it is not clear as to what the last phrase of the claim ("between the pair of left and right supporting rods (70), (72)") is referring.

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<sup>1</sup> The Examiner is assuming that the addition of such phrase it not intended to merely define a parallel relationship between the supporting rods since such relationship was previously defined by the word "parallel" before the "left and right supporting rods". It appears that Applicant now intends to recite structure for fixing the rods in a parallel relationship.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilk (U.S. Pat. 5,368,015).

Referring mainly to Figures 9, 10A and 10B, Wilk discloses a stereoscopic laparoscope apparatus comprising a laparoscope (Fig.10A, col.10, lines 48-49), a computer (44, Fig.1, col.5, lines 63-68) adapted to convert and store image information of the patient's affected part inputted via the laparoscope, and a monitor (46, Fig.1) used to output the image information converted by the computer, the laparoscope comprising: a supporting unit (344,330, Fig.10A) including a supporting rod (330) having a predetermined length and diameter; a flexible tube unit (332a,332b) including a pair of left (332a) and right (332b) flexible tubes, which are adapted to be spaced apart from each other within a predetermined angular range (note distance d1 in Figures 9 and 10B) installed at the tip end of the supporting unit (Fig.10B); and a pair of left and right cameras (312,314, Fig.9) installed at the tip end of the flexible tube unit (col. 11, lines 29-32) so that they take images of the affected part in the abdominal cavity. Wilk discloses that the flexible tubes can be spaced apart using an active actuator such as a tension cable assembly (col.11, lines 21-28). Wilk clearly intends for the stereoscopic laparoscopic componentry of

Figures 9-13 to be used in place of the monoscopic laparoscope (16) in Figure 1 (note col.4, lines 49-57 and col.10, lines 7-10). Thus, any actuator for driving the flexible tubes would be analogous to that exemplified by the tip bend control (36) in Figure 1, which is controlled by computer (22) via electric signals (col.5, lines 52-55). In such case, the analogous computer/switching circuit (326, Fig.10A) would anticipate a manipulator on the proximal end of the support unit and controlling the active actuator (e.g., motor) according to electric signals.

Although support rod (330) includes of two split prongs (332a,332b) at the distal end, in would appear that the supporting rod (330) (connected proximally to the flexible tubes) is a single tube (note in Figure 10B that the support rod 330 appear to be bifurcated since the separation between the flexible tubes appears to stop at the proximal ends of the flexible tubes). Thus, Wilk fails to disclose that the supporting unit includes a pair of parallel left and right supporting rods. However, use of two parallel tubes in place of a single tube does not constitute inventive effort and thus does not distinguish over the prior art of record. One of ordinary skill in the mechanical arts would recognize that, without criticality, a single tube or two parallel tubes, both used for the same purpose (as a support unit for the laparoscope) and both providing the same functions (supporting the flexible tubes and containing elements such as wires) would be obvious over one another as a matter of choice in design. In addition, one would be motivated to use two separate tubes for the support unit (330) of Wilk since such would provide a simpler alternative to forming a bifurcation at the distal end of a single tube, such bifurcation requiring special techniques over simply attaching two parallel tubes together. Since Applicant provides no criticality for specifying the use of two parallel tubes over use of a single tube and one of ordinary skill would have reasons for the alternative use of a single tube and two parallel tubes as

discussed above, it would have been obvious to have used two parallel "support rods" in place of the single tube (330) in Wilk.

***Response to Arguments***

6. Applicant's arguments filed April 24, 2009 have been fully considered but they are not persuasive.

Regarding the alleged "mischaracterization" of the Wilk reference, the Examiner points out that the stereoscopic laparoscope shown in Figures 9, 10A and 10B is contemplated for use in the robotic surgical system shown in Figure 1. The Examiner has pointed out evidence in the rejection appearing above to support this. It is also noted that the Examiner alluded to this in the previous Office Action, wherein the electrically controlled actuator implied in the stereoscopic embodiment of Wilk is analogous to the tip bending control (36) in Figure 1, which is electrically controlled by the computer.

Applicant also argues that the Examiner is using hindsight to modify the Wilk reference to include "the concept of two parallel tubes" (Remarks, page 5). First of all, there are two separate optical systems in a stereoscopic endoscope. The decision to placing them in separate conjoined tubes or place them side-by-side in a single tube is not a "concept" but merely a design choice. In addition, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Given the lack of specificity in the Wilk disclosure (Wilk does not specifically mention whether the two optical systems of the stereoscopic laparoscope are contained in one tube or two) and the lack of criticality in Applicant's own specification, one of ordinary skill, when reducing the Wilk device to practice, would be required to "fill in the gaps" in many instances, including the structure of the tube (330) which incorporates the two optical systems. There are really only two choices: a single tube which is bifurcated at the distal end or two separate but conjoined tubes. Where there is a limited universe of potential options, the selection of any particular option would have been obvious to one of ordinary skill in the art. In re Jones, 412 F.2d 241, 162 USPQ 224 (CCPA 1969). As pointed out in the rejection, such decision would have been within the realm of ordinary skill and, as further pointed out in the rejection, there would have been motivation.

Regarding Figure 13 of Wilk, the Examiner takes the position that this is just another alternative embodiment and the device shown in Figure 13 does not in any way evidence that tube (330) is in fact a single tube. If anything, the Examiner takes the position that such embodiment suggests a manner in which the two optical systems (332a,332b) of Figures 10A and 10B can be realized and thus supports the conclusion of obviousness set forth above.

Applicant further alleges that the Examiner failed to consider the "stated critical advantages of using the inventive paired supporting rods" (Remarks, page 5). However, Applicant fails to point out these stated critical advantages (as mentioned above, the Examiner could not find any in the specification). Instead, Applicant precedes to draw conclusions with respect to the difference in relative distance between the cameras, without any evidence to support such conclusions. The Examiner does not find this persuasive.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (571) 272-4769. The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Leubecker/  
Primary Examiner  
Art Unit 3739

jpl